

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 07-060955

(43)Date of publication of application : 07.03.1995

(51)Int.Cl. B41J 2/01

B41J 2/175

(21)Application number : 05-214031 (71)Applicant : CANON INC

(22)Date of filing : 30.08.1993 (72)Inventor : ASAI AKIRA

(54) INK JET RECORDING HEAD AND INK JET RECORDER EQUIPPED WITH THE RECORDING HEAD

$$i(r) = \frac{I}{\theta r d(r)}$$

$$q(r) = i(r)^2 \rho d(r)$$

$$q(r) = \frac{I^2 \rho}{\theta^2 r^2 d(r)}$$

(57)Abstract:

PURPOSE: To obtain a recording head having a novel heating element wherein heating distribution on a surface of a resistor is equalized and its recorder by a method wherein a heating resistor has a heating part of an approximately circularly annular or fan-like annular surface shape, and its thickness is varied inversely proportional to a distance in a radial direction from a central point of the surface shape.

CONSTITUTION: When voltage is impressed by making a current (I) flow radially along a radial direction of a heating resistor, a thickness $d(r)$ of a heating part of the heating resistor is varied inversely proportional to a radial distance (r) from a center of a surface shape. Thereby, a current density $i(r)$ at any point on the heating part at a radial distance (r) apart from the center comes to be as given by the formula (I). In the formula θ is an angle of a fan-like annulus (2π in the case of a circular annulus). Relation between the resistivity (ρ) of the resistor and a heating value $q(r)$ per unit time unit area is as given by the formula II. Therefore, the formula III is obtained.

the case of a circular annulus). Relation between the resistivity (ρ) of the resistor and a heating value $q(r)$ per unit time unit area is as given by the formula II. Therefore, the formula III is obtained.

LEGAL STATUS

[Date of request for examination] 30.06.1999

[Patent number] 3157964

[Date of registration] 09.02.2001